UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,308	07/13/2001	Robert S. Blackmore	POU920000146US1	6080

7590 11/04/2004	EXAMINER
LAWRENCE D. CUTTER, Attorney	JEAN GILLES, JUDE

IBM Corporation, Intellectual Property Law Dept.
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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _13 July 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-7_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-7_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _07/13/2001_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

This office action is responsive to communication filed on 07/13/2001.

Information Disclosure Statement

1.   The references listed on the Information Disclosure Statement submitted

on 07/13/2001 have been considered by the examiner (see attached PTO-

1449A).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

7.   Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Vaman et al (U.S. 6,011,780) in view of Miyagi et al (U.S. 5,461,607).

Regarding claim 1: Vaman et al disclose the invention substantially as

claimed. Vaman et al teach a method for providing reliable communication in an

interconnected network of data processing nodes (*figs. 1 and 2; column 7, lines

12-15*), said method comprising:

detecting a failure of nodes or communication links in a system using a

heartbeat mechanism to indicate to said nodes that at least one of said nodes or

said communication links are functioning or have failed (*column 11, lines 11-28*);

establishing an instance identifier associated with said failure (*column 12, lines 9-17*);

Vaman et al further teach sending notification of said failure (*column 7, lines 39-42*), including said instance identifier, to other nodes having existing communication links with said at least one failed node (*column 12, lines 9-25*); However, Vaman et al are silent on how to terminate, at said notified nodes, pending communication links that involve said at least one failed node, said termination being carried out in response to said notification.

In the same field of endeavor, Miyagi et al disclose "*a case where the transmission line failure is in its own apparatus and the failure transmission line accommodates the Virtual Path which is terminated by the ATM-Switch*" [*see Miyagi, fig. 9c, items 310-312; column 2, lines 36-46*].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Miyagi et al's teachings of detecting and terminating a transmission line failure with the teachings of Vaman et al, for the purpose of improving the ability of a network "*to monitor node movement and take management actions to prevent disruption*" as stated by Vaman in lines 38-43 of column 8.

Regarding **claim 2:** The combination Vaman-Miyagi et al teaches the

method of claim 1 further including the step of detecting that said at least one

failed node is no longer in a failed state and resuming communications with that

node using an incremented value for said instance identifier. [*see Vaman,*

column 11, lines 47-53, column 16, lines 15-16, 38, and 47]. By this rationale

claim 2 is rejected.

Regarding **claim 3:** The combination Vaman-Miyagi et al teaches the

method of claim 2 further including the step of resuming communications with

said other nodes using said incremented instance identifier. [*see Vaman, column*

11, lines 47-53, column 16, lines 15-16, 38, and 47]. By this rationale **claim 3** is

rejected.

Regarding claim 4: Vaman et al disclose the invention substantially as

claimed. Vaman et al teach a data processing system comprising:

a plurality of interconnected data processing nodes (*column 7, lines 12-15;*

figs. 1 and 2);

heartbeat signal generators within each said node for providing a signal to

others of said nodes indicative of node failure status (*column 11, lines 11-28*);

heartbeat signal detectors within said nodes for indicating that a certain

node has failed (*column 12, lines 9-17*);

Vaman et al further teach a first program within said nodes for establishing

an instance identifier associated with each node failure and for transmitting

notification of said failure and said instance identifier to nonfailed nodes (*column*

9, lines 24-63; column 16, appendix A); However, Vaman et al fail to explicitly

disclose a second program within said nodes for terminating, at said notified

nodes, pending communication links that involve said at least one failed node,

said termination being carried out in response to said notification.

In the same field of endeavor, Miyagi et al disclose "*a AIS cell code stored*

in an AIS cell pattern memory with a data record including failure state

management timer, monitor/drop bit, failure information and reverse direction VPI

whereas the monitor/drop bit is determined by the type of termination of the VP.

" [*see Miyagi, column 5, lines 63-67; column 6, lines 1-8*].

Accordingly, it would have been obvious to one of ordinary skill in the

networking art at the time the invention was made to have incorporated Miyagi et

al's teachings of detecting and terminating a transmission line failure with the

teachings of Vaman et al, for the purpose of improving the ability of a network "*to*

monitor node movement and take management actions to prevent disruption" as

stated by Vaman in lines 38-43 of column 8.

Regarding **claim 5:** The combination Vaman-Miyagi et al teaches the

data processing system of claim 4 in which said heartbeat signal detectors also

provide an indication that a failed node has returned to functioning status. [*see*

Vaman, column 9, lines 37-54]. By this rationale **claim 5** is rejected.

Regarding **claim 6:** The combination Vaman-Miyagi et al teaches the

data processing system of claim 5 further comprising a third program within said

nodes which resumes communication with nodes that have returned to

functioning status, said communication including transmission of a new instance

identifier. [*see Vaman, column 11, lines 21-28*]. By this rationale **claim 6** is

rejected.

Regarding claim 7: Vaman et al disclose the invention substantially as

claimed. Vaman et al teach a computer program product comprising a computer

readable medium (*fig. 1, intelligent controller, ATM switch*) on which is stored

program means (*column 8, lines 13-18*) for:

detecting a failure of nodes or communication links in a system using a

heartbeat mechanism to indicate to said nodes that at least one of said nodes or

said communication links are functioning or have failed (*column 11, lines 11-28*);

establishing an instance identifier associated with said failure (*column 12,*

lines 9-17);

Vaman et al further teach sending notification of said failure, including said

instance identifier, to other nodes having existing communication links with said

at least one failed node (*column 12, lines 9-25*); However, Vaman et al are silent

on how to terminate, at said notified nodes, pending communication links that

involve said at least one failed node, said termination being carried out in

response to said notification.

In the same field of endeavor, Miyagi et al disclose "*a case where the*

transmission line failure is in its own apparatus and the failure transmission line

accommodates the Virtual Path which is terminated by the ATM-Switch" [see

Miyagi, fig. 9c, items 310-312; column 2, lines 36-46].

Accordingly, it would have been obvious to one of ordinary skill in the

networking art at the time the invention was made to have incorporated Miyagi et

al's teachings of detecting and terminating a transmission line failure with the

teachings of Vaman et al, for the purpose of improving the ability of a network "to

monitor node movement and take management actions to prevent disruption" as

stated by Vaman in lines 38-43 of column 8.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3719.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

          October 30, 2004

William C. Vaughn
Primary Examiner
Art Unit 2143
William C. Vaughn, Jr